


## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

8

Applicant's or agent's file reference FA0824		<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US00/06960	International filing date (day/month/year) 16/03/2000	Priority date (day/month/year) 17/03/1999	
International Patent Classification (IPC) or national classification and IPC C08G18/44			
Applicant E.I. DU PONT DE NEMOURS AND COMPANY et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>			
Date of submission of the demand  29/09/2000		Date of completion of this report  21.05.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer  Scheuer, S  Telephone No. +49 89 2399 8321	



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/06960

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-14 as originally filed

**Claims, No.:**

1-38 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/06960

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims
	No:	Claims 1-38
Inventive step (IS)	Yes:	Claims
	No:	Claims 1-38
Industrial applicability (IA)	Yes:	Claims 1-38
	No:	Claims

2. Citations and explanations  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/06960

**R It m V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

D1: US-4,403,086

D2: WO-9634905

D3: Patent Abstract of Japan vol.018, n°656 & JP-A-06 256714

D4: EP-A-0708159 (cited by the Examiner and copy enclosed)

**1. Novelty:**

**D1** discloses a low VOC clear coating composition comprising crosslinkable epoxy-diol adducts, a chain extendable diblocked diisocyanate and further an aminoplast crosslinking agent. Furthermore the composition includes a catalyst and a suitable organic solvent (see col.2 line 44 to col.7 line 33). In particular, examples IX and X describe a coating composition comprising an aliphatic diblocked diisocyanate component, an epoxy-diol adduct and hexamethoxymethylmelamine and in addition an acid catalyst.

**D2** discloses a curable composition that can be a clear coat (page3 lines 14-15). The curable composition comprises a polyepoxide and a polyacid, an alkylated melamine-formaldehyde and a polyisocyanate (see claim 1, p.3 line 18 to p.7 line 6; p.9 line 23 to p.10 line 4; p.11 line 30 to p.16 line 3; p.23 line 18 to p.24 line 7).

**D3** discloses a coating composition comprising a blocked polyisocyanate compound, a melamine resin, and an epoxy resin.

**D4** discloses a clear coat composition comprising a film forming polymer having epoxy functionality, a melamine cross-linking agent and at least one blocked diisocyanate (page 2 lines 38-48, page 3 and Ex.1).

Therefore the subject-matter of **claims 1-38 does not meet the requirements of Article 33(2) PCT.**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/06960

**2. Inventive step:**

In the light of the above objection as to lack of novelty it is not at present apparent which technical features distinguish the subject-matter of these claims from the prior art and which technical problem is solved in an unexpected manner by these distinguishing features over the prior art.

Thus the subject-matter of claims 1-38 does not meet the requirements of Art.33(3) PCT.

**3. Industrial Application:**

The subject-matter of the present application is considered to meet the requirements of Art.33(4) PCT.

PATENT COOPERATION TREATY

**PCT**

**INTERNATIONAL SEARCH REPORT**

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>FA0824PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 00/ 06960</b>	International filing date (day/month/year) <b>16/03/2000</b>	(Earliest) Priority Date (day/month/year) <b>17/03/1999</b>
Applicant  <b>E.I. DU PONT DE NEMOURS AND COMPANY et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 03 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PC 00/06960

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 C08G18/44 C09D175/04 C09D163/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08G C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, WPI Data, EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 403 086 A (HOLUBKA ET AL) 6 September 1983 (1983-09-06) column 2, line 44 -column 7, line 33; claims 1-9; examples 9,10 ---	1-5, 9, 22, 24
X	WO 96 34905 A (PPG INDUSTRIES) 7 November 1996 (1996-11-07) page 3, line 18 -page 7, line 6 page 9, line 23 -page 10, line 4 page 11, line 30 -page 16, line 3 page 23, line 18 -page 24, line 7; claims 1-4, 15, 20, 24; examples --- -/--	1

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

26 July 2000

Date of mailing of the international search report

04/08/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Bourgonje, A

## INTERNATIONAL SEARCH REPORT

International Application No

PC 00/06960

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 01, 31 January 1996 (1996-01-31) & JP 07 233348 A (SHOWA ALUM CORP), 5 September 1995 (1995-09-05) abstract ---	1
X	PATENT ABSTRACTS OF JAPAN vol. 018, no. 656 (C-1286), 13 December 1994 (1994-12-13) & JP 06 256714 A (KANSAI PAINT CO LTD), 13 September 1994 (1994-09-13) abstract ---	1
A	EP 0 179 281 A (E.I. DU PONT DE NEMOURS) 30 April 1986 (1986-04-30) page 2, line 9 - line 34; claims 1-6; example 2 ---	1
A	EP 0 562 577 A (NIPPON PAINT) 29 September 1993 (1993-09-29) page 2, line 31 -page 4, line 18; claims 1,15 -----	1-3,5,9, 10



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/06960

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4403086	A	06-09-1983	NONE	
WO 9634905	A	07-11-1996	AU 5633296 A	21-11-1996
			CA 2207928 A	07-11-1996
			EP 0823922 A	18-02-1998
			JP 3017539 B	13-03-2000
			JP 11500174 T	06-01-1999
			US 5891981 A	06-04-1999
JP 07233348	A	05-09-1995	JP 2691864 B	17-12-1997
JP 06256714	A	13-09-1994	NONE	
EP 179281	A	30-04-1986	US 4623481 A	18-11-1986
			BR 8504545 A	15-07-1986
			CA 1253682 A	09-05-1989
			DE 3567476 D	16-02-1989
			ES 546797 D	16-07-1986
			ES 8609383 A	16-12-1986
			JP 61078879 A	22-04-1986
EP 562577	A	29-09-1993	JP 5271615 A	19-10-1993
			JP 2781104 B	30-07-1998
			JP 6073173 A	15-03-1994
			AU 3537393 A	30-09-1993
			CA 2092225 A	25-09-1993
			DE 69311182 D	10-07-1997
			DE 69311182 T	16-10-1997
			US 5527879 A	18-06-1996

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 07233348  
PUBLICATION DATE : 05-09-95

APPLICATION DATE : 24-02-94  
APPLICATION NUMBER : 06051212

APPLICANT : SHOWA ALUM CORP;

INVENTOR : TAKADA SUSUMU;

INT.CL. : C09D163/00 B05D 3/02 B05D 7/14 B32B 15/08 C08G 18/58 C08L 63/00

TITLE : EPOXY RESIN COMPOSITION

ABSTRACT : PURPOSE: To provide the subject composition comprising a specific epoxy resin and an amino resin and useful coatings for aluminum foil deep-drawn containers used for foods, beverages, etc., especially for the coatings not causing the release of coating films on shock lines even on two-stage deep-draw processings high in drawing ratios.

CONSTITUTION: This composition comprises (A) a phenolic glycidyl ether type epoxy resin (e.g. bisphenol A type epoxy resin preferably having a molecular weight of 4000-50000) addition-polymerized with a blocked isocyanate, (B) 40-5 pts.wt. of an amino resin (e.g. an urea-formaldehyde prepolymer or a melamine- formaldeyde prepolymer) preliminarily condensed with a bisphenol diglycidyl ether, and preferably 0.01-5wt.% of a wax comprising a silicone resin, a polyethylene wax, a polypropylene wax, a fluoro wax or a higher fatty acid (derivative).

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# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 06256714  
PUBLICATION DATE : 13-09-94

APPLICATION DATE : 04-03-93  
APPLICATION NUMBER : 05043462

APPLICANT : KANSAI PAINT CO LTD;

INVENTOR : ITO SATORU;

INT.CL. : C09D175/04 C09D175/04 C09D 5/00 C09D163/00

TITLE : COATING COMPOSITION

ABSTRACT : PURPOSE: To obtain a coating composition useful for a coating film product, having excellent chipping resistance, comprising a urethane modified polyester resin, a block polyisocyanate compound, a melamine resin, an epoxy resin and specific pigment.

CONSTITUTION: This coating composition comprises (A) 50-70wt.% of a urethane modified polyester resin, (B) 5-20wt.% of a block polyisocyanate, (C) 10-30wt.% of a melamine resin (preferably mixture of imino group-containing melamine resin and etherified melamine resin), (D) 1-10wt.% of an epoxy resin (preferably glycidyl ether of polyphenol) and (E) 200-300wt.% of pigment (preferably titanium white or diatomaceous earth) in the ratio of 43-75wt.%, preferably 45-60wt.% in the cured coating film. The preferable constitution ratio is 55-65wt.% of the component A, 8-15wt.% of the component B, 12-28wt.% of the component C, 3-6wt.% of the component D and 220-260wt.% of the component E. The components B and C act as a curing agent (cross-linking agent).

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# PATENT COOPERATION TREATY

**RECEIVED**

AUG 09 2000

From the INTERNATIONAL SEARCHING AUTHORITY

**PCT** PATENT RECORDS  
CENTER

To:  
E.I. DU PONT DE NEMOURS AND COMPANY  
Legal/Patent Records Center  
Attn. DESHMUKH, S.  
1007 Market Street  
Wilmington, Delaware 19898  
UNITED STATES OF AMERICA

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

**RECEIVED**

AUG 11 2000

(PCT Rule 44.1)

Applicant's or agent's file reference <b>FA0824PCT</b>	Date of mailing (day/month/year) <b>04/08/2000</b>
International application No. <b>PCT/US 00/ 06960</b>	International filing date (day/month/year) <b>16/03/2000</b>
Applicant <b>E.I. DU PONT DE NEMOURS AND COMPANY et al.</b>	

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Fascimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.


☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer <b>Alfredo Prein</b>
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**TRB NOTED**

## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

### INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

#### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

#### When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

#### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

#### How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

#### What documents must/may accompany the amendments?

##### Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

## NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:  
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:  
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:  
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or  
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:  
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

### "Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

### Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

### Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>FA0824PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 00/ 06960</b>	International filing date (day/month/year) <b>16/03/2000</b>	(Earliest) Priority Date (day/month/year) <b>17/03/1999</b>
Applicant  <b>E.I. DU PONT DE NEMOURS AND COMPANY et al.</b>		

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☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

**4. With regard to the title,**

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. The figure of the drawings to be published with the abstract is Figure No.**

- ☐ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- ☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

national Application No  
PCT/US 00/06960

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C08G18/44 C09D175/04 C09D163/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C08G C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, WPI Data, EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 403 086 A (HOLUBKA ET AL) 6 September 1983 (1983-09-06) column 2, line 44 -column 7, line 33; claims 1-9; examples 9,10	1-5, 9, 22,24
X	WO 96 34905 A (PPG INDUSTRIES) 7 November 1996 (1996-11-07) page 3, line 18 -page 7, line 6 page 9, line 23 -page 10, line 4 page 11, line 30 -page 16, line 3 page 23, line 18 -page 24, line 7; claims 1-4,15,20,24; examples	1

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

26 July 2000

Date of mailing of the international search report

04/08/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Bourgonje, A



C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 01, 31 January 1996 (1996-01-31) & JP 07 233348 A (SHOWA ALUM CORP), 5 September 1995 (1995-09-05) abstract	1
X	PATENT ABSTRACTS OF JAPAN vol. 018, no. 656 (C-1286), 13 December 1994 (1994-12-13) & JP 06 256714 A (KANSAI PAINT CO LTD), 13 September 1994 (1994-09-13) abstract	1
A	EP 0 179 281 A (E.I. DU PONT DE NEMOURS) 30 April 1986 (1986-04-30) page 2, line 9 - line 34; claims 1-6; example 2	1
A	EP 0 562 577 A (NIPPON PAINT) 29 September 1993 (1993-09-29) page 2, line 31 -page 4, line 18; claims 1,15	1-3,5,9, 10

# INTERNATIONAL SEARCH REPORT

Information on patent family members

national Application No

PCT/US 00/06960

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4403086	A	06-09-1983	NONE	
WO 9634905	A	07-11-1996	AU 5633296 A	21-11-1996
			CA 2207928 A	07-11-1996
			EP 0823922 A	18-02-1998
			JP 3017539 B	13-03-2000
			JP 11500174 T	06-01-1999
			US 5891981 A	06-04-1999
JP 07233348	A	05-09-1995	JP 2691864 B	17-12-1997
JP 06256714	A	13-09-1994	NONE	
EP 179281	A	30-04-1986	US 4623481 A	18-11-1986
			BR 8504545 A	15-07-1986
			CA 1253682 A	09-05-1989
			DE 3567476 D	16-02-1989
			ES 546797 D	16-07-1986
			ES 8609383 A	16-12-1986
			JP 61078879 A	22-04-1986
EP 562577	A	29-09-1993	JP 5271615 A	19-10-1993
			JP 2781104 B	30-07-1998
			JP 6073173 A	15-03-1994
			AU 3537393 A	30-09-1993
			CA 2092225 A	25-09-1993
			DE 69311182 D	10-07-1997
			DE 69311182 T	16-10-1997
			US 5527879 A	18-06-1996

# PATENT COOPERATION TREATY

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From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

MAY 24 2001

**PCT**

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**NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT  
(PCT Rule 71.1)**

To:

DESHMUKH, Sudhir G.  
E.I. DU PONT DE NEMOURS AND COMPANY  
Legal/Patent Records Center  
1007 Market Street  
Wilmington, Delaware 19898  
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year)	21.05.2001
-------------------------------------	------------

Applicant's or agent's file reference FA0824	<b>IMPORTANT NOTIFICATION</b>
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International application No. PCT/US00/06960	International filing date (day/month/year) 16/03/2000	Priority date (day/month/year) 17/03/1999
---	--	--

Applicant

E.I. DU PONT DE NEMOURS AND COMPANY et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

**4. REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/	Authorized officer
---------------------------------------	--------------------

 <p>European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465</p>	<p>Aperribay, I  Tel. +49 89 2399-8154</p>
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## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FA0824	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/06960	International filing date (day/month/year) 16/03/2000	Priority date (day/month/year) 17/03/1999
International Patent Classification (IPC) or national classification and IPC C08G18/44		
Applicant E.I. DU PONT DE NEMOURS AND COMPANY et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  29/09/2000	Date of completion of this report  21.05.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Scheuer, S  Telephone No. +49 89 2399 8321



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/06960

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-14 as originally filed

**Claims, No.:**

1-38 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/06960

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Yes:	Claims	
	No:	Claims	1-38
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-38
Industrial applicability (IA)	Yes:	Claims	1-38
	No:	Claims	

### 2. Citations and explanations see separate sheet

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

D1: US-4,403,086

D2: WO-9634905

D3: Patent Abstract of Japan vol.018, n°656 & JP-A-06 256714

D4: EP-A-0708159 (cited by the Examiner and copy enclosed)

**1. Novelty:**

**D1** discloses a low VOC clear coating composition comprising crosslinkable epoxy-diol adducts, a chain extendable diblocked diisocyanate and further an aminoplast crosslinking agent. Furthermore the composition includes a catalyst and a suitable organic solvent (see col.2 line 44 to col.7 line 33). In particular, examples IX and X describe a coating composition comprising an aliphatic diblocked diisocyanate component, an epoxy-diol adduct and hexamethoxymethylmelamine and in addition an acid catalyst.

**D2** discloses a curable composition that can be a clear coat (page3 lines 14-15). The curable composition comprises a polyepoxide and a polyacid, an alkylated melamine-formaldehyde and a polyisocyanate (see claim 1, p.3 line 18 to p.7 line 6; p.9 line 23 to p.10 line 4; p.11 line 30 to p.16 line 3; p.23 line 18 to p.24 line 7).

**D3** discloses a coating composition comprising a blocked polyisocyanate compound, a melamine resin, and an epoxy resin.

**D4** discloses a clear coat composition comprising a film forming polymer having epoxy functionality, a melamine cross-linking agent and at least one blocked diisocyanate (page 2 lines 38-48, page 3 and Ex.1).

Therefore the subject-matter of **claims 1-38 does not meet the requirements of Article 33(2) PCT.**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/06960

**2. Inventive step:**

In the light of the above objection as to lack of novelty it is not at present apparent which technical features distinguish the subject-matter of these claims from the prior art and which technical problem is solved in an unexpected manner by these distinguishing features over the prior art.

Thus the subject-matter of claims 1-38 does not meet the requirements of Art.33(3) PCT.

**3. Industrial Application:**

The subject-matter of the present application is considered to meet the requirements of Art.33(4) PCT.



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PCT/US00/06960

NOV 28 2000

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From the INTERNATIONAL BUREAU

**NOTIFICATION OF THE RECORDING  
OF A CHANGE**(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

DESHMUKH, Sudhir, G.  
E.I. du Pont de Nemours and Company  
Legal Patent Records Center  
1007 Market Street  
Wilmington, DE 19898  
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year)

13 November 2000 (13.11.00)

Applicant's or agent's file reference

FA0824PCT

International application No.

PCT/US00/06960

**IMPORTANT NOTIFICATION**

International filing date (day/month/year)

16 March 2000 (16.03.00)

1. The following indications appeared on record concerning:



the applicant



the inventor



the agent



the common representative

Name and Address

QUASHIE, Sape, Kewsi  
30060 Northgate Drive  
Southfield, MI 48076  
United States of America

State of Nationality

US

State of Residence

US

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:



the person



the name



the address



the nationality



the residence

Name and Address

State of Nationality

State of Residence

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:



the receiving Office



the International Searching Authority



the International Preliminary Examining Authority



the designated Offices concerned



the elected Offices concerned



other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Genève 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

R. Raissi

Telephone No.: (41-22) 338.83.38

Form PCT/IB/306 (March 1994)

003654185

**LSR NOTED**

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room 524  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 27 October 2000 (27.10.00)	
International application No. PCT/US00/06960	Applicant's or agent's file reference FA0824PCT
International filing date (day/month/year) 16 March 2000 (16.03.00)	Priority date (day/month/year) 17 March 1999 (17.03.99)
Applicant NAGATA, Isao et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

29 September 2000 (29.09.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer S. Mafia Telephone No.: (41-22) 338.83.38
---	--

09/1913574

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

DESHMUKH, Sudhir, G.  
E.I. du Pont de Nemours and Company  
Legal Patent Records Center  
1007 Market Street  
Wilmington, DE 19898  
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 28 May 2002 (28.05.02)
Applicant's or agent's file reference FA0824PCT
International application No. PCT/US00/06960

IMPORTANT NOTIFICATION
International filing date (day/month/year) 16 March 2000 (16.03.00)

1. The following indications appeared on record concerning:

☒ the applicant

☒ the inventor

☐ the agent

☐ the common representative

Name and Address

QUASHIE, Sape, Kewsi  
30060 Northgate Drive  
Southfield, MI 48076  
United States of America

State of Nationality  
US

State of Residence  
US

Telephone No.

Facsimile No.

Teleprinter No.

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TC 1700

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person

☐ the name

☐ the address

☐ the nationality

☐ the residence

Name and Address

DELETED

State of Nationality

State of Residence

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

Corrected Version of IB/306(31.08.01)

CORRECTED  
VERSION

4. A copy of this notification has been sent to:

☒ the receiving Office

☐ the International Searching Authority

☐ the International Preliminary Examining Authority

☐ the designated Offices concerned

☒ the elected Offices concerned

☐ other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Form PCT/IB/306 (March 1994)

Authorized officer

Ki-Nam HA

Telephone No.: (41-22) 338.83.38